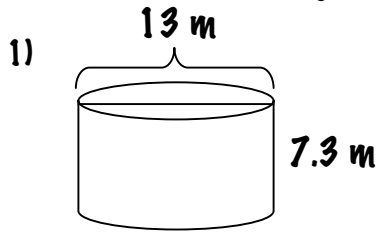


Name \_\_\_\_\_ Date \_\_\_\_\_

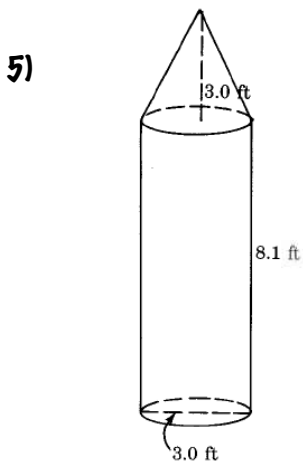
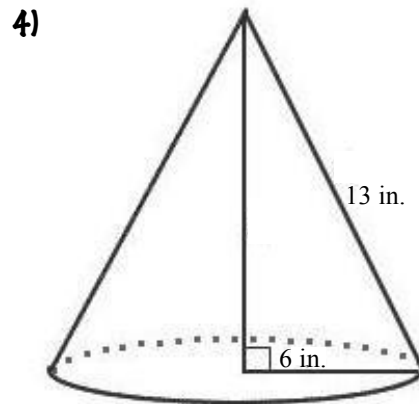
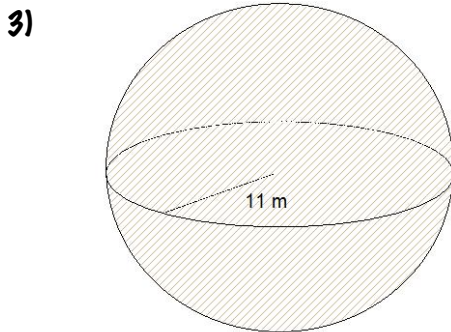
## Module 5 Practice Test

### Volume

Find the volume of each figure. Round answers to the nearest hundredth. (3 points each)



2) A cylinder with a radius of 6 feet and a height of 4 feet



6) A hemisphere with a diameter of 16 inches.

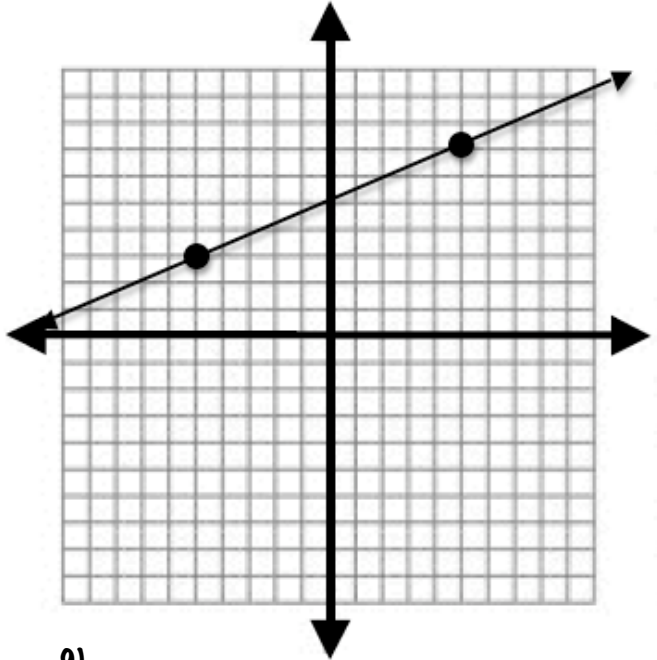
### Slope, Y-Intercept, and Equations

For each line, find the slope, the y-intercept, and an equation of the line. (3 points each)

7)  $m =$

$b =$

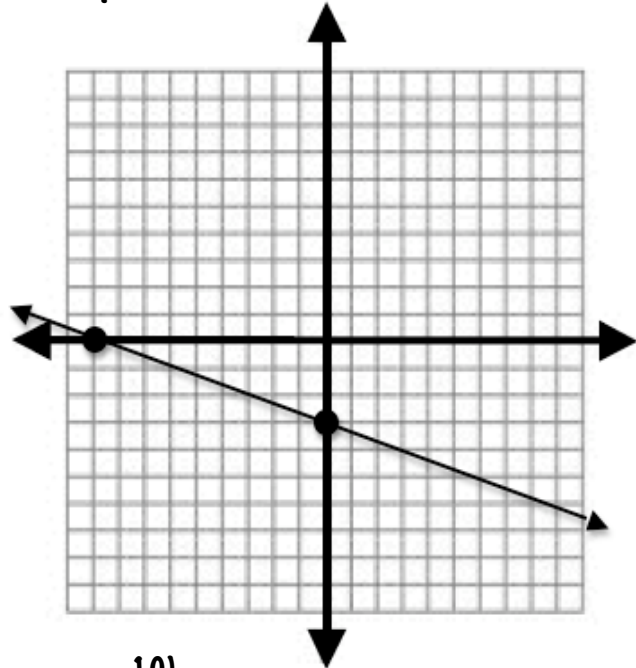
Equation:



8)  $m =$

$b =$

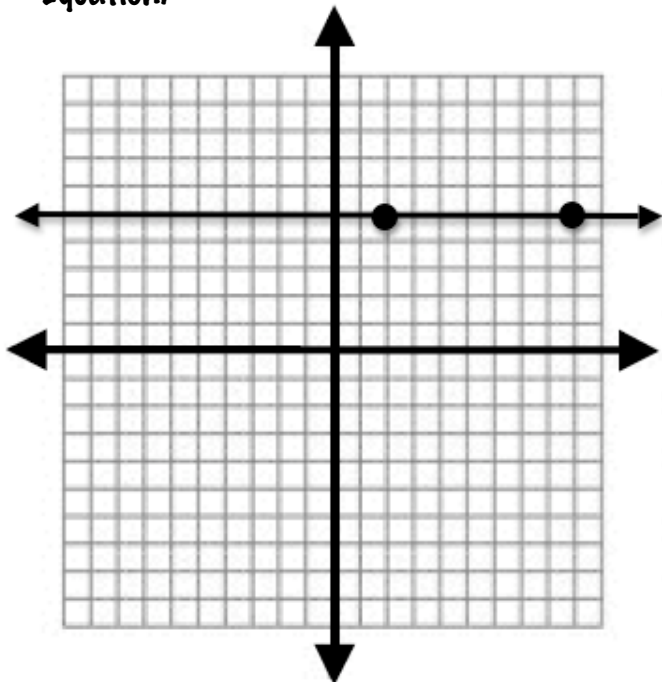
Equation:



9)  $m =$

$b =$

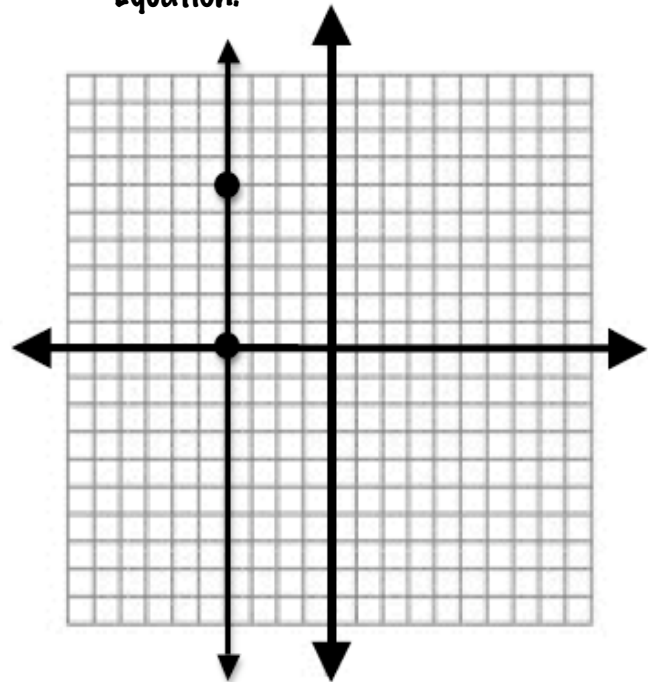
Equation:



10)  $m =$

$b =$

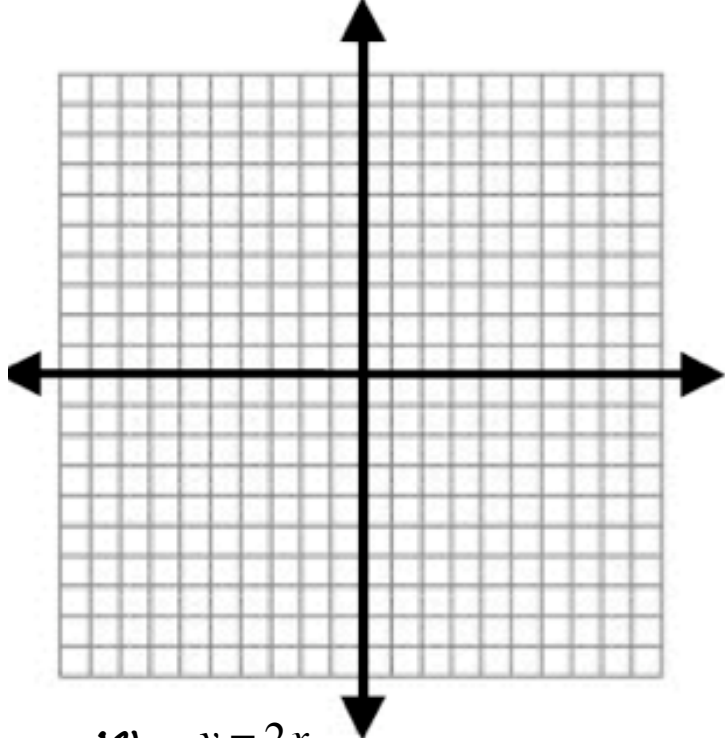
Equation:



Graph the following equations in slope-intercept form. Label the slope and y-intercept. (3 points each)

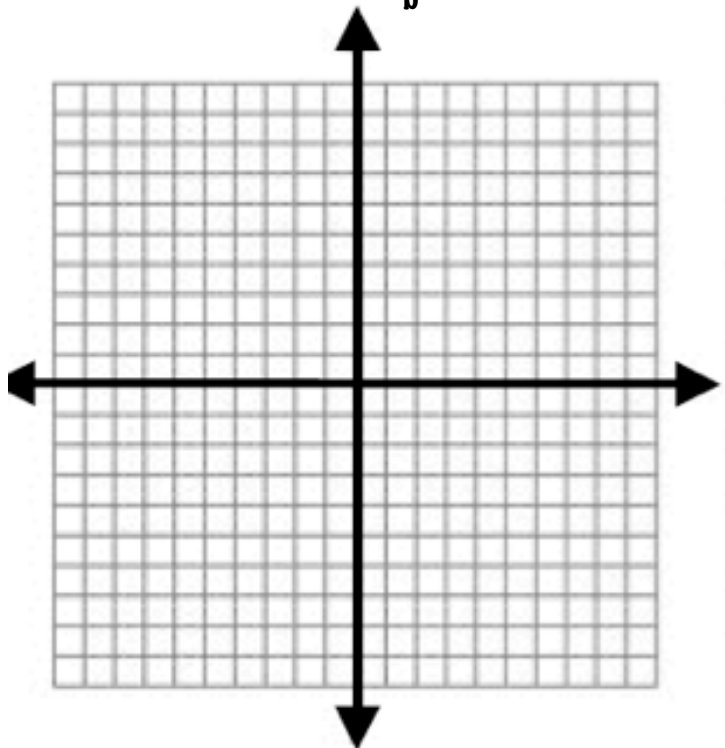
11)  $y = 5x + 1$   $m =$

$b =$



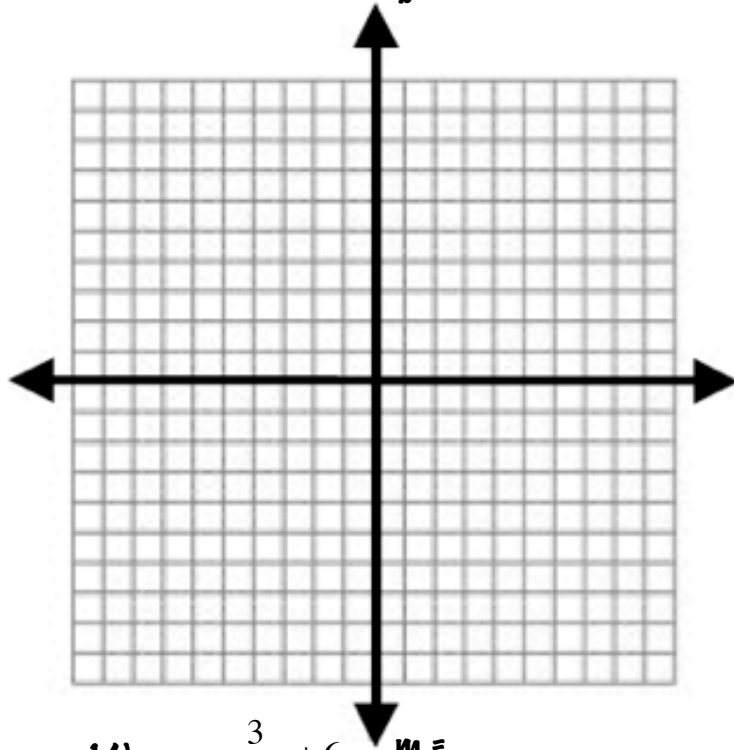
13)  $y = 2x$   $m =$

$b =$



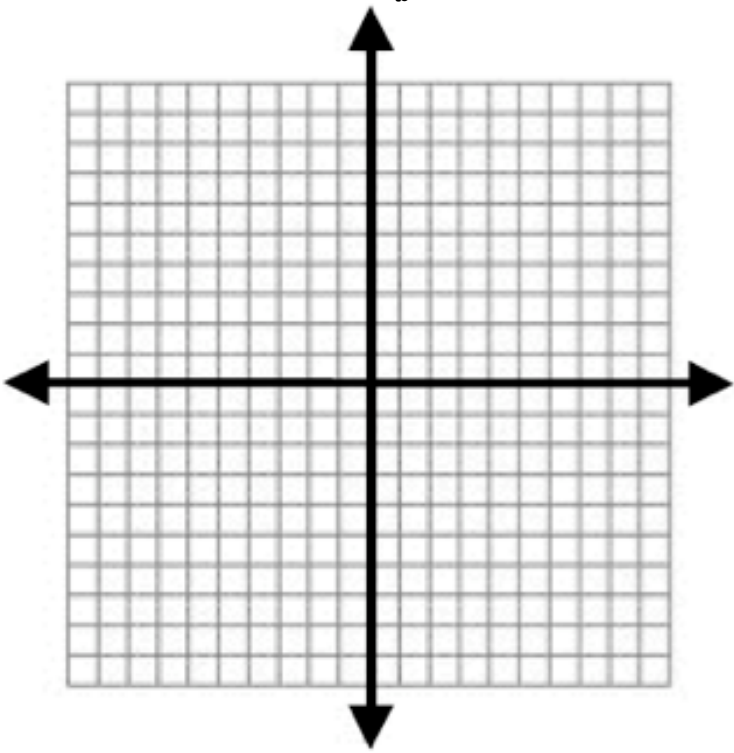
12)  $y = -\frac{2}{3}x - 3$   $m =$

$b =$



14)  $y = \frac{3}{7}x + 6$   $m =$

$b =$

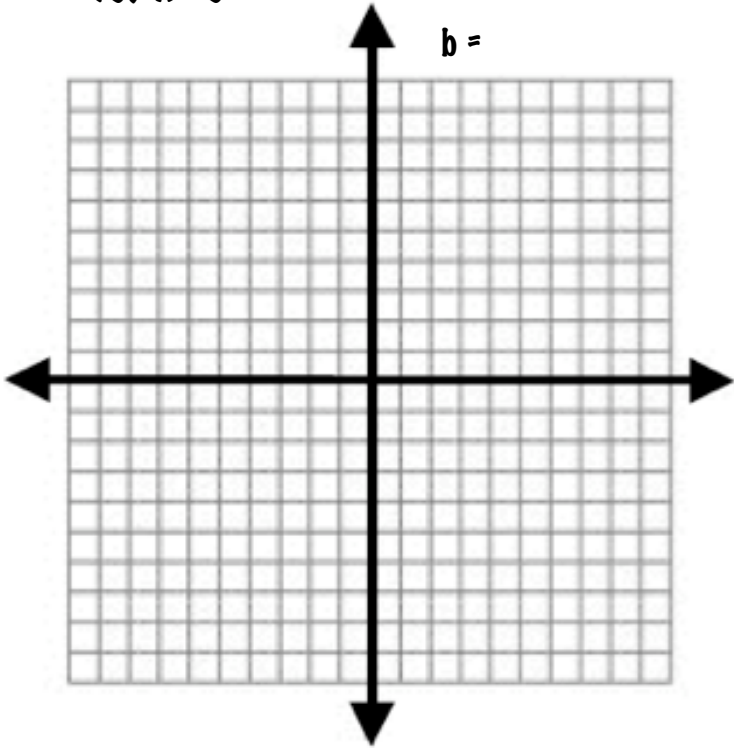


Graph the following equations in slope-intercept form. Label the slope and y-intercept. (3 points each)

15)  $x = 5$

$m =$

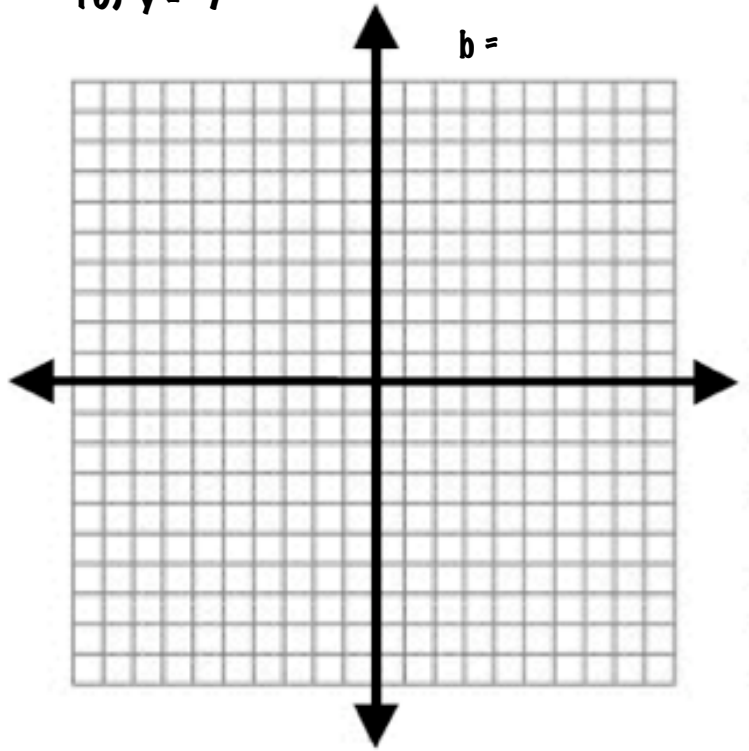
$b =$



16)  $y = -7$

$m =$

$b =$



### Rules of Exponents

Write each product or quotient as a single power. (1 - 4 points each)

17)  $n^{23} \cdot n^{48}$

18)  $\frac{21a^3c^7e^4}{14a^9ce^3}$

19)  $4m^3 \cdot 9m^5$

20)  $\frac{3^{23}}{3^{19}}$

21)  $\frac{c^4 \cdot c^{12}}{c^8}$

22)  $\frac{t^{12} \cdot u^{24}}{t \cdot u^9}$

23)  $r^{-4}$

24)  $6x^{-3}$

25)  $12^0$

26)  $2^3m^{-6}n^5$

## Using Slope as a Rate

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27) You decide to join a gym. The two gyms you like the most are Muscle Mania and Fitness Frenzy. Muscle Mania costs \$80 to join and \$20 per month. Fitness Frenzy does not have a joining fee, but costs \$50 per month. Identify  $m$ ,  $b$  and the equation to represent each gym's costs. (6 points)

Muscle Mania

$m =$

$b =$

equation:

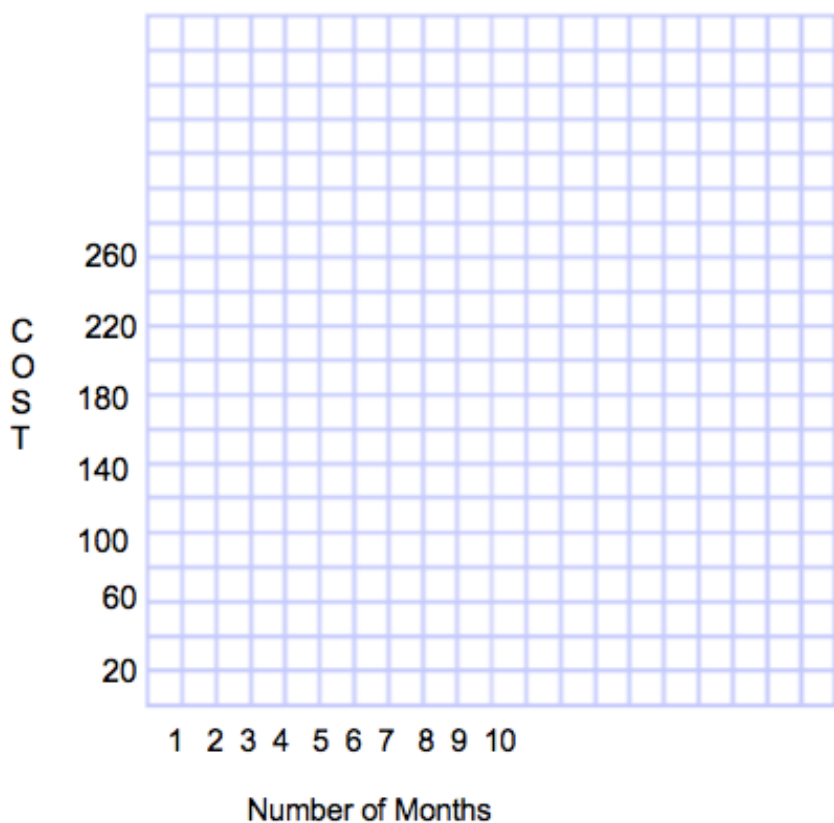
Fitness Frenzy

$m =$

$b =$

equation:

Graph each equation below. (2 points)



Use your graph to answer each question. (1 point each)

28) Which membership is less expensive to join at the beginning ?

29) Which plan is more expensive after 6 months?

30) At what point (how many months) are the memberships the same cost?